Remarks

1.   Referring to section 3 of the Office Action, claims 15 and 16 are cancelled.

2.   Referring to section 6 of the Office Action, the limitation "every transmitter and receiver" in claim 1 has been amended to "every network".

3.   Referring to section 7 of the Office Action, claim 1 has been amended to clarify that the network manager is prevented from effecting changes under a fault condition. Claims 3 and 8 have been cancelled.

4.   Referring to section 8 of the Office Action, the dependencies of claims 9 and 10 have been corrected.

5.   Referring to section 9 of the Office Action, an example of a fault condition is described at page 13, lines 4 to 9 of the specification as filed. The fault condition discussed is a fiber cut. It is respectfully submitted, however, that one skilled in the art of communication networks and particularly optical communication networks will readily understand the nature of what constitutes a fault condition in such a network and the many different conditions such as fiber cuts, power loss to a network, optical amplifier failure, transmitting laser failure etc. that are commonly encountered as fault conditions in such networks. It is therefore not necessary in the context of communication networks to define the nature of what constitutes a fault condition nor to list all the possible system conditions or apparatus failures that are considered to comprise fault conditions. It is submitted therefore that the specification provides sufficient basis for one skilled in the art to put the invention into effect.

6.   Referring to section 12 of the Office Action, the Examiner will note that claim 1 has been amended to generally incorporate the subject matter of claims 2 and 3 as

filed and further amended to distinguish the method as claimed over the disclosure of Olivia (US6654802). The method of the present invention as now defined by claim 1 is directed to a method of determining connectivity of networks in a communication network using unique signature data transmitted by each network into the network, wherein a network that was previously receiving valid unique signature data from another network does not report reception of invalid signature data to the network manager to thereby prevent the network manager effecting changes to the connectivity of the networks under a fault condition. While it is desirable to have the network manager arranged to automatically determine the connectivity topology of the network rather than this being done manually as before, it is not desirable to have the network manager automatically change the connectivity on occurrence of all or any fault conditions since, in doing so, it may mask the occurrence of the fault condition leading to a delay in the fault being detected.

7.   The Examiner has drawn attention to column 7, lines 3 to 40 of Olivia by way of contending that Olivia teaches the step of a network that was previously receiving valid unique signature data from another network does not report detection of invalid signature data to the network manager to thereby prevent the network manager effecting changes to the connectivity of the networks under a fault condition. Applicant respectfully disagrees that this section of Olivia or any part of this reference teaches such a step.

8.   Olivia discloses that each network has a unique identifier, one that is unique to it within the network. In each network, each port of that network has an identifier unique to it within the network. Thus, for any network-port pair, the combination of the network's identifier with the port's identifier uniquely identifies the pair within the network. Data identifying the network-port pairs is transmitted between networks and is made available to a network manager. The network manager uses such data to determine the connection topology of the network. Destination ports that are not connected are assigned a null value (column 7, lines 28/29). Although the value

assigned to a destination port that is not connected is null, this data is still made available to the network manager in order that it can determine no current connections (column 7, lines 10/11) as in the network connection example illustrated in figure 3 of Olivia and as discussed at column 7 thereof. The network manager is, however, notified of all changes including when ports are installed or removed from networks and when networks are installed or removed from the network (column 7, lines 32 to 40). Thus, where a destination port that is not connected and which has been assigned a null value is then connected, this change will be notified to the network manager. The converse is also true. Thus, where a fault condition such as a fiber cut disconnects a port of a network or, more usually, the network from the network, this change will be notified by other networks to the network manager. There is no disclosure in Olivia that any network that was receiving valid signature data from another network can be controlled to not send invalid signature data now being received on the occurrence of a fault condition to the network manager nor is this contemplated by this reference. Thus, the method of claim 1 is novel over the disclosure of Olivia and further is nonobvious in view of Olivia since it is counter-intuitive to not send data to the network manager on occurrence of a fault condition.
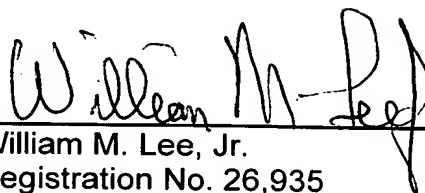
9.   Independent claims 6, 12 and 13 have been amended to be consistent with claim 1 and thus the foregoing discussion of Olivia is equally applicable thereto. These claims are therefore also novel and nonobvious in view of Olivia.

10.   New claim 17 is directed to a network element arranged to not send invalid signature data to the network manager on occurrence of a fault condition. It is submitted that this independent claim is also novel and nonobvious in view of Olivia.

11.   In view of the foregoing, it is respectfully submitted that this application is now in condition for allowance.

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Respectfully submitted,

William M. Lee, Jr.
Registration No. 26,935
Barnes & Thornburg LLP
P.O. Box 2786
Chicago, Illinois 60690-2786
(312) 214-4800
(312) 759-5646 (fax)